CHAPTER TWO

1998 – 2003 STRATEGIC PLAN INITIATIVES

EMS SYSTEM COMPONENTS

The current levy period can be characterized as a time of system expansions and strengthening of internal relationships. Plans for the 1998 – 2003 EMS levy period are characterized as a time to strengthen external relationships and build a bridge to the future.

The Emergency Medical Services system in King County will continue its tradition as a public health and safety program. Structured as a tiered response system, Advanced Life Support services will continue to be provided by paramedics who are trained and certified by the University of Washington. Basic Life Support services will continue to be provided by Emergency Medical Technician / fire fighters.

As essential public services, ALS services will be supported primarily by the EMS levy and BLS services will continue to be supported on an incremental basis by EMS levy and primarily funded through the fire service. The EMS Division will strengthen its role in coordinating regional EMS activities, quality assurance, and collaboration with other public and private health care entities.

Field Medicine
As a key access point into the broader health care system, EMS will play a small but critical role as part of the health care safety net. Its primary responsibility is to provide emergency medical services in the field, referring non-emergent and primary care calls to more appropriate providers.

Universal Access
The County EMS system will assure universal access to EMS services throughout King County, taking into consideration the financial and operational practicalities of serving residents in the more remote and lesser populated areas of the county.

Quality
As an internationally recognized regional model for Emergency Medical Services, the County EMS system will continue to deliver the highest quality service within available resources. Enhancement of quality assurance and quality improvement programs will be a primary focus during the ensuing levy period.

Funding
Direct costs for ALS services will be funded through the EMS levy with an expectation that host agencies will absorb indirect program costs through fire service budgets, hospital funds, or county general funds (CX funds). As an incremental cost to the fire service, EMS levy allocations for BLS services will support EMT training and continuing education, limited personnel costs, equipment purchases, and other related EMS costs.

Research
The County EMS system will continue to support field medicine research in collaboration with the University of Washington School of Medicine, Harborview Medical Center, and UWMC. Areas of analysis will expand beyond cardiac arrest and trauma to include other types of emergency services' outcome measures.

Collaboration
The County EMS system will collaborate with other public and private health care entities to minimize the rate of growth in health care costs and to ensure continued high quality patient care.

Community Service
As an essential community service, the County EMS system will provide service or assure access to more appropriate types of assistance to all in need regardless of ability to pay and with due respect to cultural and ethnic diversity.

Standards
EMS providers will meet uniform standards for ALS and BLS service delivery as defined by the Medical Program Director, including standards on quality, minimum levels of service, data collection and reporting, transport disposition guidelines, and other standards that promote cost-effective and efficient EMS services.

Pilot Projects
The County EMS system will initiate pilot projects to evaluate the feasibility of system improvements prior to implementation. Pilot studies will be used to evaluate intervention efforts, refinement of ALS triage guidelines, development of BLS quality and performance standards, and dispatch screening.

STRATEGIC INITIATIVES 1998 – 2003

Over the next six years, EMS providers will undertake a number of strategic initiatives to improve the County's EMS system and to assure it can deliver high quality services within available funds. Many of the initiatives are new to the EMS system and require coordination and cooperation across multiple jurisdictions as well as collaboration with non-EMS health care entities.

STRATEGIC INITIATIVE #1:
Diminish the rate of growth in demand for EMS services to 3% growth per year.

County BLS service volumes increased an average of 6% per year and ALS services increased an average of 4.6% per year during the current levy period. This rate of increase exceeds population growth and aging factors. Other variables, such as general trends in our health and social service system, may also explain the rate of change.

To accommodate this growth, the County has increased its ALS capacity this levy period from seven to 14 units. Development, installation and ongoing costs for a new paramedic unit is a significant investment. Methods need to be found to improve management of the growth in paramedic workloads and to reduce the need for additional ALS capacity in the future.

There are three major approaches to diminish continued increases in EMS calls for medical emergencies, including (1) public education (2) injury and illness prevention and (3) referral to other types of assistance when medically appropriate.

Referral to other types of assistance may diminish the need to expand the EMS system beyond which future resources may support. The 9-1-1 telephone system must remain an open access point for all emergency calls. Some calls, however, do not require emergency ALS or BLS response and, in the future, the EMS system may respond differently by

expanding the types and levels of assistance available. Dispatch criteria and procedures will be revised to better match the appropriate response to the needs of the caller. This may include referral to social and health services when appropriate or non-emergency response by a BLS agency.

During the next levy period, the EMS system will pursue three major initiatives to diminish the number of BLS and ALS responses while providing the public with appropriate and effective assistance. The initiatives will be pursued through:

- coordination with the department of public health and other providers on injury and illness prevention and intervention programs;
- revision of dispatch and care guidelines to screen non-urgent calls for referral to social and health care services when medically appropriate; and
- collaboration with local health plans and providers to educate the public on when it is appropriate to call 911 for assistance and to offer practical and easily accessible alternatives.

STRATEGIC INITIATIVE # 2:
Use Existing Resources More Efficiently

Projections indicate that four more ALS units may be needed in the county unless existing resources can be utilized more efficiently and the rate of growth in demand minimized.

This poses a significant challenge to the County EMS system and the population it serves. To meet this challenge, EMS providers plan to:

- modify ALS service delivery and resource allocations;
- revise and refine ALS dispatch triage guidelines; and
- establish a broader array of transport destinations to shorten time and distance factors for both BLS and some ALS calls.

Such changes will be implemented in concert with a strong public information campaign to assure consumers and other health care providers are aware of the changes and are able to accommodate them. Specific program changes to be explored and, if feasible, implemented include:

(1) Revise and refine ALS dispatch triage criteria

Paramedics indicate that current criteria-based dispatch guidelines automatically call for their assistance on many calls where EMTs could handle the situation. To corroborate this, the EMS Division will study the feasibility of refining BLS and ALS triage guidelines to increase the focus of ALS care on patients who will most benefit from ALS services. This will effect the scope of service expected of BLS providers by expanding the number and types of BLS calls with EMT / firefighters as sole responders.

The EMS Division will work under the guidance of the Medical Program Director and with the assistance of other medical control physicians, paramedics and EMT's to assure that modifications to the ALS triage guidelines meet patient care standards and take into consideration the scope of practice and training requirements expected of EMT's.

This study should be completed within the first year of the levy period, allowing sufficient time during the second and / or third year to empirically test the validity of any dispatch modifications prior to implementation.

(2) Establish a broader array of transport destinations

A major component of the EMS system is transportation of the patient. Under current EMS guidelines, most transports are destined for hospital emergency rooms. This is medically appropriate for ALS transports which involve critically ill and severely injured patients. However, BLS transports involve patients whose conditions require medical attention, but not necessarily at the level of service and cost associated with hospital emergency departments.

The availability of a broader array of BLS transport destinations may reduce health care costs by treating patients closer to home and in more appropriate health care settings. It may also facilitate BLS providers' capacity to expand the types of cases they see as sole responders, by diminishing the number of long BLS transports.

County EMS providers will continue discussions with local health plans and other healthcare providers on the feasibility of establishing non-hospital transport destinations for medically appropriate EMS cases. In addition, it will be necessary to identify and work with urgent care centers and/or large medical groups interested in serving as EMS referral centers. And finally, the EMS Division will revise and refine dispatch guidelines and EMT/paramedic transport guidelines to implement this strategic initiative.

(3) Coordinate with private transport companies

As an integral component of the EMS system in King County, private transporters provide complementary resources that support the EMS system's responsibilities as an essential public service. EMS providers are encouraged to continue working with private transporters to explore new opportunities to collectively meet the growing needs of the population and to establish a process to examine the most effective role and relationship between public and private BLS transporters.

(4) Revise ALS performance standards

The EMS Division plans to revise performance standards for ALS units by increasing the annual utilization expected of each unit. Utilization of units varies from 600 – 3,200 calls per year. Variations in the utilization of County Medic Units are affected by current ALS service boundaries, geographic barriers, distance factors, and response time standards. Units operating 24 hours a day in urban settings average 3,000 calls per year while EMT/P units operating in rural parts of the county average 550 ALS calls per year, in addition to their BLS responsibilities. The 12-hour units began operation in December, 1996, and are currently meeting expectations. Their utilization efficiency will be substantiated after one year.

Recent expansion of ALS capacity this levy period allows reconfiguration of ALS service area boundaries. As service areas decrease in size, it is feasible to increase the number of calls served by each unit per year.

Higher utilization together with continuation of high quality services, requires extensive monitoring of call volume, response times, and other service indicators. The EMS Division has developed a monitoring system designed to track geographic changes in call volume and to measure performance indicators which

identify when to reallocate or redeploy resources, and / or realign service area boundaries. The EMS Division will continue this monitoring system, working with EMS providers to improve data collection and analysis capabilities, and to assure that utilization of existing resources is maximized.

(5) Revise response time standards for medically appropriate calls

A new service delivery option for EMS may involve standards that distinguish degree of urgency by type of call. The county's current response time standards are 4–6 minutes for BLS and 10 minutes for ALS. These standards are based on empirical research for cardiac arrest and trauma where there is medical evidence to support early medical intervention as a means to improve patient outcome; the earlier the intervention, the better the outcome.

Additional empirical research is needed to establish outcomes for early intervention among other medical illnesses or injuries. If response time standards can be lengthened or responses delayed for certain types of cases without adversely impacting patient outcomes, it may be possible to delay or minimize growth in ALS resources.

During the first year of the next levy period, the EMS Division under direction of the Medical Program Director, will undertake a pilot project to test the feasibility of varying response time standards for specific types of calls.

(6) Explore alternative ALS unit scheduling options

The EMS Division implemented two 12-hour paramedic units this levy period and a third unit is authorized. This scheduling option allows ALS capacity expansion to serve peak call periods without the cost of operating a unit 24 hours a day. Future use of this or other scheduling options will be explored as needed throughout the next six years as a means to manage ALS costs and to increase utilization of existing resources.

Timing to pursue the six program options is very important to successfully reduce the need for additional ALS units and to manage ALS costs. EMS providers will develop and implement program changes throughout the first three years of the levy period during which time there is projected to be sufficient capacity within the existing system to absorb additional ALS call volume. By 2000 or 2001, demand is projected to exceed existing capacity, requiring that program changes be in place.

A two to three year implementation schedule assures that prospective program refinements can be thoroughly studied and evaluated prior to implementation. It will also allow time for public education, dissemination of public information, and development of injury and illness prevention and intervention services that support this challenging effort.

STRATEGIC INITIATIVE # 3
Enhance Existing Programs and Add New Programs to Meet Emerging Community Needs

At this time, projected funding for EMS services in the County supports moderate enhancement of existing programs; provides limited funding to explore the feasibility of adding new programs; and allows evaluation of new programs through pilot projects. As a strategic initiative of the next levy cycle, the EMS Division will move forward with program enhancements as funds become available. To expedite funding of new

programs, the Division will collaborate with other private and public organizations to address emerging community needs. Specific program enhancements identified for the next six years include:

(1) Dispatcher training

It is a major priority during the next levy period to enhance dispatcher training. This is needed to revise ALS dispatch criteria, establish the infrastructure to refer appropriate 9-1-1 calls to other types of assistance, and to promote a stronger and more uniform dispatch capability throughout the county.

(2) Public Education

Successful implementation of this strategic plan requires increased public awareness of proposed changes to the EMS system. Through enhanced public education efforts, EMS providers will:

- inform citizens about the appropriate use of the 9-1-1 system;
- increase prevention and intervention activities; and
- identify other social and health organizations available for assistance.

(3) Special Populations

The EMS system will enhance its responsiveness to special populations.

- EMS providers throughout the County are increasingly responding to calls from people with English as a second language who may use the EMS system as an access point to primary care and other social services. The EMS system is in a position to educate such individuals, as well as other citizens, to the appropriate use of 9-1-1, and to guide them to appropriate follow-up services. The EMS Division will work with the EMS providers and the Health Department to develop a set of brochures or other information packets that BLS providers can leave during the initial call, guiding patients to alternative services and follow-up care when appropriate.

- EMS providers are responding to an increasing number of frail patients. This will continue to grow due to an aging population, increased use of home health services, as well as continued transition in the health care industry from inpatient to outpatient based services. In response, EMS providers will develop and initiate an intervention program to reduce the need for emergency services before the need arises. As funds become available the EMS Division will pilot an intervention project in collaboration with other health care entities and community services used by this segment of the population.

(4) Continuous Quality Improvement

The EMS Division will enhance its quality assurance activities through development of a uniform quality improvement program to be implemented throughout the county EMS system. Funding for development, implementation and on-going management of the enhanced program will include a combination of EMS levy funds together with additional revenues. The EMS Division will explore the availability of grants, both public and private, to supplement levy revenues earmarked for quality improvements.

(5) Enhanced Research

As funds become available, the EMS Division will explore the feasibility of collaborating with the Department of Public Health, health plans, hospitals, physician groups, and possibly the University of Washington on longitudinal patient outcome studies. The focus of the effort is to establish an integrated database, including information on pre-hospital, hospital, rehabilitation, and follow-up care. This data will support empirical research on the effectiveness of early medical intervention for conditions other than cardiac arrest and major trauma for which data already exist.

STRATEGIC INITIATIVE #4
Develop and Implement an EMS Advisory Committee

The purpose of the EMS Advisory Committee is to assist the King County EMS Division to implement the 1998 - 2003 EMS Strategic Plan. In its capacity as an advisory body, the Committee's primary activities will include the following. The EMS Division will expand this list of activities as additional needs emerge. At a minimum the Committee will advise on:

- clinical perspectives from physicians on the committee regarding regional EMS issues;
- operational issues related to EMS training, transport, communications, etc;
- annual review and status update of the 1998 - 2003 EMS Strategic Plan progress;
- potential opportunities for new and creative funding initiatives;
- EMS collaboration and coordination with other health care providers and health plans; and
- periodic review of the EMS system financial status, including discussion of funding issues, options, and implications for ALS, BLS and regional services.

The Committee will meet regularly, but not less than four times each year, including a meeting each Spring where financial forecasts and budgets for the upcoming year are presented. This permits linkage with the EMS Division's budget cycle each summer. In the event of major changes in service demands, program requirements or other factors that may impact the EMS system and/or implementation of this plan, the Committee will advise the EMS Division on proposed corrective actions.

Membership of the Advisory Committee will be broad based to assure representation of diverse constituencies within the Seattle and King County's EMS system. The Committee members will be appointed and confirmed by the EMS Division Manager and limited to local EMS providers representing the following organizations:

Physicians
King County Medical Program Director, Seattle Medic One Medical Program Director, and Chair of the Medical Director's Group or his designee

ALS Providers
One EMS representative from each ALS agency, including Bellevue Fire Department, Evergreen Hospital and Medical Center, Shoreline Fire Department, King County Medic One, and Seattle Fire Department.

BLS Providers
One EMS representative from each city over 50,000 population and not otherwise represented, to be selected by their fire department or fire department chief; one urban fire district provider to be selected by King County Commissioners; and one rural fire department provider to be selected by King County Commissioners.

Private Ambulance
One EMS representative from local private ambulance companies.

Dispatch
One representative selected by the Dispatch Centers.

Labor
One local BLS representative and one local ALS representative selected by the Washington State Council of Fire Fighters.

Health Plans
One representative selected by the Health Plan and Provider workgroup.

Regional Services
Manager of the EMS Division and agency staff as needed.

Many program initiatives need to be developed and implemented during 1997. The current EMS Strategic Plan Steering Committee will serve as an interim advisory committee to the EMS Division as it launches this strategic planning effort. Current members, or their designees, will serve in this capacity through December, 1997.

POTENTIAL IMPLICATIONS OF THE 1998 – 2003 STRATEGIC INITIATIVES

Successful implementation of the 1998 – 2003 strategic initiatives is projected to reduce the potential growth in EMS call volume in the county from about 119,000 EMS calls to 107,000, a 10% reduction. It is estimated that refinements to the ALS dispatch triage criteria could reduce the percentage of EMS calls receiving an ALS response from 33% in 1997 to 30% by 2003. This is projected to reduce the number of potential ALS calls from 38,000 to 33,000 by 2003, a 13.3% reduction (see Table 2.1).

The reduction in ALS call volume is projected to diminish the need for 2.5 – 3.0 ALS units by 2003. Strategic initiatives intended to increase existing ALS unit capacity will further reduce the need for added ALS units in the future.

Table 2.1

PROJECTED EMS RESPONSES FOR URGENT AND EMERGENT CARE
County Services Only/Excludes Seattle

	1998	1999	2000	2001	2002	2003
COUNTY EMS RESPONSES						
No Change in Current Trends	92,285	97,162	101,396	107,931	113,326	119,165
Successful Implementation of Strategic Initiatives	87,517	91,110	94,832	98,823	102,959	107,264
Potential Reduction in County EMS Call Volume Through Strategic Initiatives	4,768	6,052	6,564	9,108	10,367	11,901
COUNTY ALS RESPONSES						
No Change in Current Trends	30,425	31,767	32,909	34,893	36,460	38,104
Successful Implementation of Strategic Initiatives	29,139	29,880	30,626	31,421	32,222	33,033
Potential Reduction in County ALS Call Volume Through Strategic Initiatives	1,286	1,887	2,283	3,472	4,238	5,071